



PATENT
450100-02779

THE SPECIFICATION:

Please replace the first full paragraph on page 8 with the following rewritten paragraph:

a1 --The projector 2 includes therein an optical system and so forth and, based on display data supplied from the control device 3 over the RGB cable 6, projects light onto the display screen S to display an image thereon.--

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Please replace the third full paragraph on page 9 with the following rewritten paragraph:

a2 --The above-described projector 2 and control device 3 are interconnected as shown in Fig. 2. That is, the projector 2 is provided with a hub 11 having an upstream port 21 and a downstream port 22 conforming to the USB standard. The control device 3 is provided with a downstream port 31 connected to the USB cable 5. The USB device includes at least an upstream port.--

Please replace the paragraph bridging pages 9 and 10 with the following rewritten paragraph:

a3 --In this projection display system 1, the control device 3 controls the protocol as a host to control the projector 2 and the USB device connected to the projector, as targets. At this time, bi-directional communication is executed between the control device 3, projector 2 and the USB device in the form of packets including additional information such as addresses of the destination of data transmission or data types.--

Please replace the first full paragraph on page 10 with the following rewritten paragraph:

a4 --That is, in transferring display data between the projector 2 and the USB device, the control device 3 first generates and transmits a token packet including addresses of a data receiving side. Next, the control device 3 transmits a data packet and, after the data packet has arrived at the data receiver, it transmits a handshaking packet. If the data receiving side has received the data packet as normally, it transmits a packet including an ACK to the control device 3. If conversely the data receiving side has failed to receive the data packet, it transmits a packet including a NAK to the control device 3. The control device 3 performs isochronous transfer, interrupt transfer, control transfer or bulk transfer, depending on the type of data, such as display data transmitted to the projector 2 or the USB device, or on the projector control signals.--

Please replace the last full paragraph on page 11 with the following rewritten paragraph:

a5 --The controller 33 performs processing in accordance with the general-purpose OS (operating system) such as, for example, Microsoft Windows (registered trademark). This controller 33 controls the USB device connected to the projector 2 and the USB device connected to the projector 2.--

Please replace the paragraph bridging pages 11 and 12 with the following rewritten paragraph:

a6
cont --When performing control in accordance with an operating input signal from the operating input unit 34 or the USB mouse signals, the controller 33 reads in the projector control program to generate projector control signals and pointer control signals. When executing

a6
Cmtd control of the USB device connected to the projector 2, the controller 33 executes a control program in keeping with the USB device connected to the projector 2.--

Please replace the third full paragraph on page 13 with the following rewritten paragraph:

a7 --The series B connector 12 is connected to the series A connector 32 of the control device 3 over the USB cable 5, while being connected to the hub 11. The series B connector 12 is fed with the projector control signal and the pointer control signal from the control device 3 to output the signals to the hub 11. The series B connector 12 also outputs a packet input from the hub 11 to output the packet over the USB cable 5 to the control device 3.--

Please replace the second full paragraph on page 14 with the following rewritten paragraph:

a8 --The hub controller 23 is connected to the upstream port 21 and to the downstream port 22. The hub controller 23 references to a PID, indicating the type of the packet appended to the packet from the upstream port 21, to output the packet to one of the downstream ports 22a and 22b. The hub controller 23 also references to a packet from each downstream port 22 to output the packet to another downstream port 22 or to the upstream port 21.--

Please replace the third full paragraph on page 15 with the following rewritten paragraph:

a9
Cmtd --The USB mouse processor 16 is connected to the signal conversion processor 15 and to the downstream port 22b. This USB mouse processor 16 converts the data from the signal conversion processor 15 into USB mouse signals issued when the mouse pursuant to the USB is

Q-9
cmld
actuated. The USB mouse processor 16 generates a packet including converted USB mouse signals to output the resulting packet to the hub 11.--

Please replace the first full paragraph on page 16 with the following rewritten paragraph:

Q-10
--The display controller 19 is connected to the USB projector processor 17, projection display unit 18 and to the IR light receiver 14. The display controller 19 controls the contents demonstrated on the projection display unit 18, while generating a projector control signal, representing the state of the projector 2 and so forth, to output the thus-generated control signal to the USB projector processor 17.--

Please replace the paragraph bridging pages 17 and 18 with the following rewritten paragraph:

Q-11
cm
--If, in the above-described projection display system 1, the control device 3 and the projector 2 are interconnected, the control device 3 recognizes the projector 2 as three USB devices, namely the hub 11 and the USB mouse function and the USB projector function, both connected to the hub 11. The controller 33 of the control device 3 retrieves the connected projector 2 by executing the projector control program. The USB projector processor 17 of the projector 2 is responsive thereto to acquire from the display controller 19 the information including the projector type name of the projector 2, serial number thereof, and the function thereof that can be set, generates a packet including this information and transmits the thus-generated packet to the control device 3. Hence, the controller 33 recognizes the projector 2 to be controlled by the projection display unit 18. On the other hand, the projector 2 generates, in the display controller 19, the information such as the status or the picture quality adjustment

function in displaying the picture on the projection display unit 18, and causes this information to
be included in the USB projector processor 17 in the packet to transmit the resulting packet to
the control device 3.--

Please replace the first full paragraph on page 18 with the following rewritten paragraph:

--When a picture is to be shown on the display screen S in the projection display system
1, the controller 33 of the control device 3 executes the projector control program, responsive to
the actuating input signal from the operating input unit 34, or to the USB mouse signal to cause a
projector control picture, such as that shown in Fig. 5, to be demonstrated on the display unit 35.
On the other hand, the controller 33 causes the projector control picture to be demonstrated on
the display unit 35, while transmitting a projector control signal testifying to the demonstration
of the projector control picture and display data representing a projector control picture to the
projector 2 for demonstrating the projector control picture on the display
screen S.--

Please replace the first full paragraph on page 19 with the following rewritten paragraph:

--The controller 33 demonstrates, as the operation control picture, power source button
display units 61a, 61b, for turning the power source of the projector on or off, function button
displays 62, 63 for switching the application programs for generating the display data, an input
changeover button 64 for switching the type of the display data input from the control device 3 to
the projector 2, picture on/off button displays 65a, 65b for start/stop of picture display, acoustic
on/off button displays 66a, 66b for start/stop of acoustic output, an APA button display 67, a
projector selection display (Model Select) 68 for representing the name of the device, the picture

quality which is to be adjusted, a bucket transmission/reception display (Send, Receive) 69

a-13
concd indicating that a packet is to be transmitted/received between the projector 2 and the control device 3, and a screen end display (close) 70.--

Please replace the paragraph bridging pages 19 and 20 with the following rewritten paragraph:

a-14 --The controller 33 is responsive to the inputting of the USB mouse signal, testifying to the selection of the various button displays 61 to 70 demonstrated on the display unit 35, as a result of actuation of the pointing device provided in the operating input unit 34, to transmit projector control signals for controlling the projector 2 or the display data for demonstrating the picture on the display screen S to the projector 2 over the USB cable 5 or the RGB cable 6.--

Please replace the first full paragraph on page 20 with the following rewritten paragraph:

a-15 --The controller 33 is also responsive to the inputting from the projector 2 of a packet including the USB mouse signal testifying to selection of the button displays 61 to 70 demonstrated on the display screen S as a result of actuation of the remote controller 4, to generate a projector control signal adapted for controlling the projector 2 to transmit the generated control signal through the series A connector 32 to the projector 2 to output display data for demonstrating a picture on the display screen S over the RGB cable 6.--

Please replace the second full paragraph on page 22 with the following rewritten paragraph:

a-16
--The controller 33 generates a packet including a projector control signal for adjusting the picture quality of the picture demonstrated on the display screen S, responsive to the inputting from the projector of the operating input signal or the USB mouse signal stating that the operating input unit 34 or the remote controller 4 has been operated and selected the displayed representations 71 to 85. The controller 33 sends the packet so generated to the projector 2 through the series A connector 32.--

Please replace the third full paragraph on page 22 with the following rewritten paragraph:

a-17
--If another projector is connected to port 13 of the projector 2, that is if two projectors are connected to the controller 33, the controller 33 demonstrates picture quality setting pictures 90, 91 shown in Fig. 7. The controller 33 is then responsive to whether or not the picture quality setting display is possible, depending on the setting state of each projector and settable items to display a picture quality setting screen.--

Please replace the paragraph bridging pages 22 and 23 with the following rewritten paragraph:

a-18
--That is, the controller 33 acquires the information including the projector type name, serial number, and settable functions, from the display controller 19 to set the projector selection display 81 of the picture quality setting picture 90 as VPL-PX30 (S/N: 9999999), while setting the projector selection display 81 of the picture quality setting picture 91 as VPL-CS1 (S/N: 0000122).--

Please replace the second full paragraph on page 24 with the following rewritten

paragraph:

a-19
--If fed with the operating input signal or the USB mouse signal, stating that a picture is to be demonstrated based on display data prepared in accordance with the registered application program, the controller 33 sends the display data prepared in accordance with the registered application program through the RGB cable 6 to the projector 2.--

Please replace the third full paragraph on page 25 with the following rewritten paragraph:

a-20
--With the present projection display system 1, the system can be constructed using the universal hub 11 and USB cable 5, thus reducing the cost involved in software and hardware.--

Please replace the first full paragraph on page 26 with the following rewritten paragraph:

a-21
--Since only one USB series A connector is loaded on the portable personal computer, with the projection display system 1, another USB device cannot be connected if the projector is already connected. However, since the projector 2 is provided with the hub 11, the other USB device can be connected to the projector 2 to provide for facilitated system extension.--

IN THE CLAIMS:

Please amend Claims 1, 3-5 and 7-8 as follows:

a-22
Sub B1
Cm
--1. (Amended) A projection display apparatus connected to a control device as a host through a serial interface, in which data is transmitted/received bi-directionally to display a picture on a display screen, said apparatus comprising: